

WHAT IS CLAIMED IS:

SUB AB 1. A method of generating directed content, the method comprising:  
2 receiving a set of lists, each list in said set of lists associated with a respective  
3 web service in a plurality of web services and each list in said set of lists including  
4 searches submitted to said respective web service;  
5 distilling said set of lists into a frequency database, the database storing search  
6 frequency information indicating, for respective searches, a frequency with respect to  
7 each of one or more of the plurality of web services;  
8 obtaining a query;  
9 searching the frequency database for matches between said query and a  
10 search in the database and for selecting the matches having highest associated  
11 frequency, each selected match indicating a respective selected web service of the  
12 web services; and  
13 generating directed content based on one or more of the selected web  
14 services.

1 2. The method of claim 1, wherein said directed content is a link to a web service  
2 that was selected during said searching step.

1 3. The method of claim 1, said method further comprising identifying a category  
2 that corresponds to a web service that was selected during said searching step; said  
3 directed content including an advertisement that corresponds to said category.

1 4. The method of claim 1, wherein said directed content is an advertisement, the  
2 method further comprising:

3 routing said query to an instance of a web service that was selected  
4 during said searching step; and

5 collecting a response generated by said selected web service;

6 wherein said advertisement includes a portion of said response.

1 5. The method of claim 1, wherein a match having highest associated frequency  
2 is determined by a rank of a search, which matches said query, in a list associated  
3 with a web service in said plurality of web services.

6. The method of claim 1, wherein a match having highest associated frequency is determined by a score that is a function of (i) a rank of a search, which matches said query, in a list associated with a web service in said plurality of web services and (ii) the logarithm of the frequency of said search in the list.

7. A method of generating directed content, the method comprising:  
 receiving a plurality of lists, each list in said plurality of lists associated with a respective web service and each list in said plurality of lists including searches submitted to said respective web service;  
 distilling each list in said plurality of lists into a frequency sorted list, the frequency sorted list including a plurality of entries, each entry having a search and a number of times said search was submitted to a respective web service;  
 obtaining a query;  
 searching the frequency sorted list for matches between said query and a search in the frequency sorted list and for selecting the matches having highest associated frequency, each selected match indicating a respective selected web service of the web services; and  
 generating directed content based on one or more of the selected web services.

8. A computer program product for use in conjunction with a computer system, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising:  
 a frequency database for storing search frequency information;  
 a program module for generating directed content, said program module comprising:  
 instructions for receiving a set of lists, each list in said set of lists associated with a respective web service in a plurality of web services and each list in said set of lists including searches submitted to said respective web service;  
 instructions for distilling said set of lists into said frequency database, the database storing search frequency information indicating, for respective searches, a frequency with respect to each of one or more of a plurality of web services;

14 instructions for obtaining a query;  
 15 instructions for searching the frequency database for matches between  
 16 said query and a search in the database and for selecting the matches having highest  
 17 associated frequency, each selected match indicating a respective selected web  
 18 service of the web services; and  
 19 instructions for generating directed content based on one or more of the  
 20 selected web services.

1 9. The computer program product of claim 8, wherein said directed content is a  
 2 link to a web service that was selected by said instructions for searching.

1 10. The computer program product of claim 8, wherein said program module  
 2 further comprises instructions for identifying a category that corresponds to a web  
 3 service that was selected by said instructions for searching; said directed content  
 4 including an advertisement that corresponds to said category.

1 11. The computer program product of claim 8, wherein said directed content is an  
 2 advertisement, the program module further comprising:  
 3 instructions for routing said query to an instance of a web service that  
 4 was selected by said instructions for searching; and  
 5 instructions for collecting a response generated by said selected web  
 6 service; wherein said advertisement includes a portion of said response.

1 12. The computer program product of claim 8, wherein a match having highest  
 2 associated frequency is determined by a rank of a search, which matches said query,  
 3 in a list associated with a web service in said plurality of web services.

1 13. The computer program product of claim 8, wherein a match having highest  
 2 associated frequency is determined by a score that is a function of (i) a rank of a  
 3 search, which matches said query, in a list associated with a web service in said  
 4 plurality of web services and (ii) the logarithm of the frequency of said search in the  
 5 list.

1 14. A computer program product for use in conjunction with a computer system,  
2 the computer program product comprising a computer readable storage medium and  
3 a computer program mechanism embedded therein, the computer program  
4 mechanism comprising:

5 a frequency sorted list for storing search frequency information;  
6 a program module for generating directed content, said program module  
7 comprising:

8 instructions for receiving a plurality of lists, each list in said plurality of  
9 lists associated with a respective web service and each list in said plurality of lists  
10 including searches submitted to said respective web service;

11 instructions for distilling each list in said plurality of lists into said  
12 frequency sorted list, the frequency sorted list including a plurality of entries, each  
13 entry having a search and a number of times said search was submitted to a  
14 respective web service;

15 instructions for obtaining a query;

16 instructions for searching the frequency sorted list for matches between  
17 said query and a search in the frequency sorted list and for selecting the matches  
18 having highest associated frequency, each selected match indicating a respective  
19 selected web service of the web services; and

20 instructions for generating directed content based on one or more of the  
21 selected web services.

1 15. A computer system for generating directed content, the computer system  
2 comprising:

3 a central processing unit;

4 a memory, coupled to the central processing unit, the memory storing:

5 a frequency database for storing search frequency information;

6 a program module for generating said directed content, said program  
7 module comprising:

8 instructions for receiving a set of lists, each list in said set of lists  
9 associated with a respective web service in a plurality of web services and each list in  
10 said set of lists including searches submitted to said respective web service;

11 instructions for distilling said set of lists into said frequency database,  
12 the frequency database storing search frequency information indicating, for respective

13 searches, a frequency with respect to each of one or more of a plurality of web  
14 services;

15 instructions for obtaining a query;

16 instructions for searching the frequency database for matches between  
17 said query and a search in the database and for selecting the matches having highest  
18 associated frequency, each selected match indicating a respective selected web  
19 service of the web services; and

20 instructions for generating directed content based on one or more of the  
21 selected web services.

1 16. The computer system of claim 15, wherein said directed content is a link to a  
2 web service that was selected by said instructions for searching.

1 17. The computer system of claim 15, wherein said program module further  
2 comprises instructions for identifying a category that corresponds to a web service  
3 that was selected by said instructions for searching; said directed content including an  
4 advertisement that corresponds to said category.

1 18. The computer system of claim 15, wherein said directed content is an  
2 advertisement, the program module further comprising:  
3 instructions for routing said query to an instance of a web service that  
4 was selected by said instructions for searching; and  
5 instructions for collecting a response generated by said selected web  
6 service; wherein said advertisement includes a portion of said response.

1 19. The computer system of claim 15, wherein a match having highest associated  
2 frequency is determined by a rank of a search, which matches said query, in a list  
3 associated with a web service in said plurality of web services.

1 20. The computer system of claim 15, wherein a match having highest associated  
2 frequency is determined by a score that is a function of (i) a rank of a search, which  
3 matches said query, in a list associated with a web service in said plurality of web  
4 services and (ii) the logarithm of the frequency of said search in the list.

1 21. A computer system for generating directed content, the computer system  
2 comprising:

3 a central processing unit;

4 a memory, coupled to the central processing unit, the memory storing:

5 a frequency sorted list for storing search frequency information;

6 a program module for generating said directed content, said program module  
7 comprising:

8 instructions for receiving a plurality of lists, each list in said plurality of lists  
9 associated with a respective web service and each list in said plurality of lists  
10 including searches submitted to said respective web service;

11 instructions for distilling each list in said plurality of lists into said frequency  
12 sorted list, the frequency sorted list including a plurality of entries, each entry having a  
13 search and a number of times said search was submitted to a respective web service;

14 instructions for obtaining a query;

15 instructions for searching the frequency sorted list for matches between said  
16 query and a search in the frequency sorted list and for selecting the matches having  
17 highest associated frequency, each selected match indicating a respective selected  
18 web service of the web services; and

19 instructions for generating directed content based on one or more of the  
20 selected web services.

1 22. A method of generating a directed advertisement, the method comprising:  
2 obtaining a query;

3 searching a web resource for a match between said query and an element of  
4 said web resource;

5 selecting a web service based on said element of said web resource;

6 routing said query to an instance of said selected web service;

7 collecting a response generated by said selected web service; and

8 generating said directed advertisement, said directed advertisement including a  
9 portion of said response in said advertisement.

1 23. The method of claim 22, wherein said element of said web resource is a  
2 category.

24. The method of claim 22, wherein said web resource is the Open Directory Project.

25. The method of claim 22, wherein  
said web resource is a frequency database, the database storing search  
frequency information indicating, for respective searches, a frequency with respect to  
each of one or more of a plurality of web services; and  
said element of said resource is an entry in the frequency database  
corresponding to said selected web service, said search frequency information stored  
in said frequency database indicating that said search has been conducted at said  
selected web service at a high frequency relative to other web services of said  
plurality of web services.

26. A computer program product for use in conjunction with a computer system, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising:

a program module for generating a directed advertisement, said program module comprising:

instructions for obtaining a query;  
instructions for searching a web resource for a match between said query and an element of said web resource;

instructions for selecting a web service based on said element of said web resource;

instructions for routing said query to an instance of said selected web service;  
instructions for collecting a response generated by said selected web service;

and

instructions for generating said directed advertisement, said directed advertisement including a portion of said response in said advertisement.

27. The computer program product of claim 26, wherein said element of said web resource is a category.

28. The computer program product of claim 26, wherein

1 29. A computer system for generating directed content, the computer system  
2 comprising:

3 a central processing unit;

4 a memory, coupled to the central processing unit, the memory storing:

5 a program module for generating said directed content, said program module  
6 comprising:

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7      instructions for obtaining a query;
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8 instructions for searching a web resource for a match between said query and  
9 an element of said web resource;

10 instructions for selecting a web service based on said element of said web  
11 resource;

12 instructions for routing said query to an instance of said selected web service;

13 instructions for collecting a response generated by said selected web service;

14 and

15 instructions for generating said directed advertisement, said directed  
16 advertisement including a portion of said response in said advertisement.

1 30. The computer system of claim 29, wherein said element of said web resource  
2 is a category.

1     31.     The computer system of claim 29, wherein

2        said web resource is a frequency database, the database storing search  
3        frequency information indicating, for respective searches, a frequency with respect to  
4        each of one or more of a plurality of web services; and



- 5 said element of said resource is an entry in the frequency database  
6 corresponding to said selected web service, said search frequency information stored  
7 in said frequency database indicating that said search has been conducted at said  
8 selected web service at a high frequency relative to other web services of said  
9 plurality of web services.

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